

P30032WO

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Claims:

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1. Filter element for a chromatographic column (1),
comprising
- a support cage (3) whose contour defines a cylinder
open on one side, and
10 - a filter (10) which abuts the inside of the support
cage (3) and defines a hollow space which is open on
one side.

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2. Filter element according to claim 1,
characterised in that
the support cage (3) has at its open end a
substantially annular collar (4).

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3. Filter element according to claim 2,
characterised in that
the support cage (3) preferably has, in the region
adjacent to the collar (4), a sleeve-like portion (6)
having a closed outer surface, the outside diameter of
which extends over the outer contour of the support
25 cage (3).

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4. Filter element according to any one of the preceding
claims,
characterised in that
30 the support cage (3) has been manufactured from a
plastics material.

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5. Filter element according to any one of the preceding claims,
characterised in that
5 the outer contour of the support cage is formed by longitudinal struts (7) as well as at least one annular strut (8).
6. Filter element according to any one of the preceding claims,
10 characterised in that the end edges of the support cage (3) are defined by at least one transverse strut (9).
7. Filter element according to any one of the preceding claims,
15 characterised in that the filter (2) is fixedly joined, in particular adhesively bonded, to the inside of the support cage
20 (3).
8. Filter element according to any one of the preceding claims,
characterised in that
25 the filter (10) has been manufactured from a paper material.
9. Filter element according to claim 8,
characterised in that
30 the paper material lines the inner contour of the support cage (3) in a single layer.

10. Chromatographic separating column,
characterised in that
it has a syringe-shaped column element (2) which is
open at one end and is provided at the other end with
a tapered outlet (11) and into which a filter element
(3, 10) according to any one of the preceding claims
has been inserted.
11. Chromatographic separating column according to
claim 10,
characterised in that
the size of the support cage (3) is such that at least
part of its outer surface abuts the inside of the
column element (2).
12. Chromatographic separating column according to
claim 11,
characterised in that
at least part of the outer surface of the support cage
(3), in particular the sleeve-like portion (6), abuts
the inside wall of the column element (2) in a
frictionally engaged manner, while the remaining part
of the outer surface is at a distance from the inside
wall of the column element (2).
13. Chromatographic separating column according to any one
of claims 10 to 12,
characterised in that
the collar (4) of the support cage (3) rests on the
open end (5) of the column element (2), the length of

the filter element being such that a gap (13) is formed between the closed end face of the support cage (3) and the outlet of the column element (2).

- 5 14. Chromatographic separating column according to claim 13,
characterised in that
chromatography material (12) is provided in the gap
(13).
- 10 15. Chromatographic separating column according to any one of claims 8 to 14,
characterised in that
the support cage (3), in the region of its open end,
15 is joined directly or indirectly to the column element (2) in an air-tight manner by means of a separate sealing element (15) or a sealing element (15) joined to the support cage (3).
- 20 16. Chromatographic separating device,
characterised in that
it has a separating column (2) according to any one of claims 8 to 15 as well as a device for applying a
partial vacuum (14) to the outlet (11) of the
25 separating column.
17. Chromatographic separating column,
characterised in that
it comprises:

- a syringe-shaped column element (2) which is open at one end and is provided at the other end with a tapered outlet (11), and
 - a filter inserted into the column element (2), the filter being flat and delimiting a hollow space which is open on one side in the direction of the open end of the column element (2).
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18. Separating column according to claim 17,
10 characterised in that
the filter is joined at the edges to a collar of a plastics material.
19. Chromatographic separating column,
15 characterised in that
it comprises:
- a syringe-shaped column element (2) which is open at one end and is provided at the other end with a tapered outlet (11), and
 - 20 - a filter, inserted into the column element (2), which has dimensionally stable stiffening elements of struts and/or rings,
the filter being flat and delimiting a hollow space which is open on one side in the direction of the open
25 end of the column element (2).
20. Separating column according to claim 19,
characterised in that
the filter is formed from a paper-like material and
30 the stiffening elements are formed from a plastics material.